

## **R E M A R K S**

The Official Action of 24 August 2005 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claims 7 and 15-17 have been amended to remove the bases for the rejections appearing at paragraph 2 of the Official Action. New Claim 21 has been added based on the examples in the specification (see discussion below) more completely to define the subject matter which Applicant regards as his invention. All claims as amended are respectfully believed to be sufficiently definite to satisfy the dictates of 35 USC 112, second paragraph.

The claims stand rejected under 35 USC 103(a) as allegedly being unpatentable over the references and combinations of references cited at paragraphs 4-8 of the Official Action. Applicant respectfully traverses these rejections.

The claimed invention is based at least in part on Applicant's finding that, in an ink composition comprising a pigment encapsulated by a polymer having a carboxyl group, the conjoint use of methylisothiazolone (MIT) and octylisothiazolone (OIT) provides for improved storage stability and discharge stability of the ink composition. This is shown, by way of example, from the results of the experimentation described in the specification at pages 14-15, wherein the claimed inks comprising both MIT and OIT were compared with inks not comprising either MIT or OIT (see Table 1 on page 15 of the specification). Table 1 shows that the claimed ink compositions performed better in each of the storage stability and discharge stability tests than ink compositions containing MIT or OIT only.

The experimentation described in the specification also shows that the effect of using MIT and OIT in an ink composition, which comprises a pigment encapsulated by a polymer

having a carboxyl group as colorant, is different from the effect of using MIT and OIT in an ink composition comprising a dye or surface treated pigment as colorant. This may be seen by comparing the results shown in Table 3 on page 18 of the specification using the recited encapsulated pigment with the results shown in Table 4 on pages 19-20 of the specification using a different colorant. The tables show that the stability of the recited encapsulated pigment is more sensitive to the effects of MIT and OIT than is the stability of the surface treated pigment. It is respectfully submitted that, as of the filing date of the present application, one of skill in the art could not have predicted the effect of MIT and OIT on the dispersion stability of an ink composition comprising the recited encapsulated pigment from the effect of MIT and OIT on the dispersion stability of an ink composition comprising a surface treated pigment.

Neither of the primary references cited by the Examiner, WO 2000/75245 (Komatsu) or WO2001/44384 (Miyabayashi), shows or suggests the effect that MIT and OIT would have on the dispersion stability of an ink composition comprising a pigment encapsulated by a polymer having a carboxyl group as colorant. Komatsu discloses only a surface treated pigment, whereas Miyabayashi does not disclose the use of MIT and OIT. The Examiner contends that Miyabayashi provides a motivation for using the encapsulated pigment described therein in Komatsu because Miyabayashi teaches that such colorant possesses high dispersion stability, but if one of skill in the art were striving for high dispersion stability, he or she would not have incorporated MIT and OIT in an ink composition comprising the recited encapsulated pigment because of the unpredictability of the effect on such stability (see discussion above). Accordingly, it is respectfully submitted that there would have been no motivation, absent the hindsight provided by the present specification, to combine these references as proposed by the Examiner.

In this respect, Komatsu suggests the use of MIT or OIT only in the fourth of the five (5) embodiments described therein, and Example 4 includes no example of an ink composition containing both MIT and OIT. Since the surface-treated pigment described in Komatsu has relatively-low polymer content, it resists sepsis compared to pigment inks dispersed with polymer such that an ink composition comprising the surface-treated pigment does not have the same need for antiseptics. In any event, Komatsu has no disclosure that would motivate a person of skill in the art to add both MIT and OIT to a **pigment dispersed with polymer**.

Miyabayashi not only does not describe the conjoint use of MIT and OIT in an ink composition comprising the recited encapsulated pigment, but does not describe the use of antiseptics at all. Moreover, the disclosure in Miyabayashi that teaches that the described encapsulated pigment is beneficial for high dispersion stability (Miyabayashi at column 23, lines 4-5), teaches away from the use of antiseptics that could adversely affect such stability. See MPEP Section 2143.01 (“The proposed modification cannot render the prior art unsuitable for its intended purpose.”)

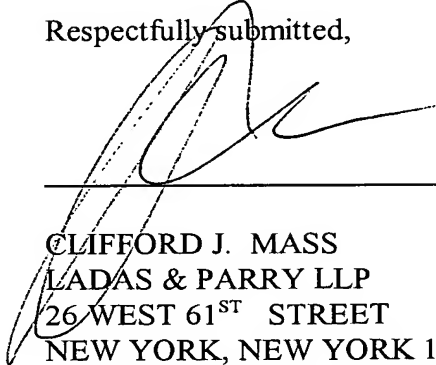
EP 676140 merely discloses that MIT and OIT are effective in preventing fungi and bacteria. It also examines concentration, but does not disclose or suggest that the concentrations are applicable to an ink composition. EP 676140 *a fortiori* could not provide one of skill in the art with even a reasonable expectation that MIT and OIT could be added to an ink composition comprising the claimed encapsulated pigment without adversely affecting the dispersion stability thereof.

In view of the above, it is respectfully submitted that the cited references are not properly combinable to set forth even a *prima facie* case of obviousness for the invention as

defined in any of the claims of record. Accordingly, it is respectfully submitted that the rejections should be withdrawn with respect to all of the claims. With particular respect to claims 4 and 21, it is respectfully submitted that the evidence of record in the specification would be sufficient to rebut any alleged *prima facie* case of obviousness set forth by the cited art in any event. In this respect, the results shown in Tables 1 and 3 of the specification show the criticality of providing the recited antiseptics in the claimed ink in the recited amounts to increase storage stability.

In view of the above, it is respectfully submitted that all rejections and objections of record have been overcome and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,



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